### **American Plastics Council**

Biodegradable and Compostable Survey General Public (RDD) n=1,000 U.S. adults (±3.1%) Topline

2006

Note: All numbers reported as percentages unless otherwise noted

Q1. I'd like to discuss what it means to you for something to be "biodegradable." Please tell me, in your own words, what you think it means if something is "biodegradable." [PROBE: What else does this mean to you?]

Answers to this question will be summarized in PowerPoint presentation

Q2. From what you know, if something is labeled "biodegradable," does that mean it will decompose in...

Ranked by "Yes"	Yes	No	Unsure/DK
		, , , , , , , , , , , , , , , , , , ,	
The natural environment	85.9	8.2	5.9
In a landfill	83.2	11.2	5.6
In your backyard	80.5	14.9	4.6



Q3. As you may know, some manufacturers are starting to make packaging products — things like water bottles, coffee cups, food takeout containers, and shopping bags — that are designed to be biodegradable. Which would be less burdensome in a landfill: traditional packaging products or biodegradable packaging products, or is there no difference? [PROBE: Would that be much less burdensome or somewhat less burdensome in a landfill?]

Traditional packaging products much less burdensome	3.7
Traditional packaging products somewhat less burdensome	4.5
Biodegradable packaging somewhat less burdensome	21.9
Biodegradable packaging much less burdensome	51.8
No difference	12.9
Unsure (not read)	40
Official (not read)	4.8
Refused (not read)	0.5
•	
Refused (not read) TOTAL TRADITIONAL LESS	0.5

Q4. If a package is labeled "biodegradable," what should be the maximum amount of time that it should take for that package to decompose?

One month or less	19.2
Three months	6.6
Six months	8.3
One year	26.1
Two to four years	4.7
Five years or more	16.5
Other	0.5
Unsure (not read)	17.4
Refused (not read)	0.7

Q5. In your view, which is better for the environment: a package that will biodegrade or a package that can be recycled at the end of its useful life, or is there no difference? [PROBE: Would that be much better for the environment or somewhat better for the environment?]

Biodegradable much better	19.7
Biodegradable somewhat better	7.2
Recycled somewhat better	17.3
Recycled much better	30.2
No difference	22.0
Unsure (not read)	3.3
Refused (not read)	0.3
TOTAL BIODEGRADABLE BETTER	26.9
TOTAL RECYCLED BETTER	47.5

Q6. Thinking about various types of packaging – things like water bottles, coffee cups, food takeout containers, and shopping bags – if these items were "biodegradable," do you think there would be much more littering, somewhat more littering, somewhat less littering, much more littering or no difference?

Much more littering	11.5
Somewhat more littering	10.6
Somewhat less littering	9.7
Much less littering	7.9
No difference	57.0
Unsure (not read)	3.0
Refused (not read)	0.3
TOTAL MORE LITTERING	22.1
TOTAL LESS LITTERING	17.6

Q7. For each of the following statements, please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. First...[ROTATE LIST]

Ranked by "Strongly Agree"	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Unsure (not read)	Refused (not read)
Biodegradable packages will help reduce the burden on our landfills	49.3	33.8	8.3	5.1	3.3	0.2
Biodegradable packages will help reduce pollution in our oceans, rivers and beaches	46.2	33.4	11.6	6.6	1.9	0.2
Biodegradable packages will help reduce the amount of litter in the environment	22.7	34.7	25.4	14.0	3.2	<del></del>
With biodegradable packaging, littering isn't really a problem.	10.4	14.5	37.6	35.7	1.6	0.1

Q8. As you may know, packaging can be made from natural materials, like trees, corn and other plant-based matter, or can be made from synthetic materials, like traditional plastics which are made from petroleum. If a package is made with natural materials, such as the newer corn-based plastics, is it more likely to be biodegradable than a package made from synthetic materials, or not?

Yes – More likely	79.6
No – No more likely	10.1
Unsure (not read)	10.0
Refused (not read)	0.3

Q9. Now I'd like to discuss what it means to you for something that can be composted or is "compostable." In your own words, what does it mean if something can be composted or is "compostable?" [PROBE: What else does this mean to you?]

Answers to this question will be summarized in PowerPoint presentation

Q10. If something were said to be "biodegradable", does that mean the same thing, or something different than if something were said to be "compostable?" [IF SAME THING: Does it mean exactly the same thing to you, does it mean something *very* similar, or only *somewhat* similar?]

Exactly the same	6.8
Very similar	12.9
Somewhat similar	19.9
Different	48.5
Unsure (not read)	11.6
Refused (not read)	0.3

### [ASKED OF THOSE WHO SAY VERY/SOMEWHAT SIMILAR IN Q10.]

Q10A. In what way is it similar for something to be "biodegradable" and something to be "compostable?" [n=355]

Both decompose/break down	50.0
Neither harmful to environment	13.6
Both return to the earth	8.2
Both reused	6.7
Both basically the same	4.1
Both biodegradable	3.0
Both garbage/organic waste	1.5
Are different	8.9
Other	2.2
Unsure/depends (not read)	1.8



### [ASKED OF THOSE WHO SAY VERY/SOMEWHAT SIMILAR OR DIFFERENT IN Q10.] Q10B. In what way is it different for something to be "biodegradable" and something to be "compostable?" [n=687]

Bio breaks down/compost reusable	21.0
Bio is man-made/synthetic whereas compost is natural/leaves or food	15.2
Bio doesn't harm soil but compost helps it	13.8
Different amount of time to break down	11.7
Different process of decomposition: bio breaks down naturally but compost needs help	7.8
Bio less harmful, enriches soil	1.6
Both are similar processes	10.1
Other	8.8
Unsure/depends	10.0

### Q11. Do you have a composting device or a compost pile in your home or yard?

Yes	23.6
No	75.3
Unsure (not read)	0.7
Refused (not read)	0.4

Q12. Some newer types of packaging are designed to be compostable – that is, the packaging will decompose naturally when placed in a certain environment. If a package, such as a water bottle or deli container, were labeled "compostable," would that mean to you that it can decompose in a home compost pile or home composting device?

Yes	71.3
No	17.3
Unsure (not read)	11.0
Refused (not read)	0.4



Q13. Some newer types of packaging are designed to be compostable under professionally managed conditions requiring high heat, moisture and oxygen flow. After the packaging is used, these items **must** be collected and taken to a large-scale, industrial composting facility in order to fully breakdown as intended. In your view, is it correct for packaging like this to be labeled "biodegradable", or not?

Yes	36.7
No	56.1
Unsure (not read)	6.5
Refused (not read)	0.6

### SPLIT SAMPLE A [n=500]

Q14A. If a packaging item is designed to decompose in a large-scale, industrial composting facility under professionally-managed conditions and can't readily decompose in the natural environment or in your backyard – would it be okay to label it **biodegradable**, or not?

Yes	31.5
No	61.1
Unsure (not read)	7.3
Refused (not read)	0.1

### SPLIT SAMPLE B [n=500]

Q14B. If a packaging item is designed to decompose in a large-scale, industrial composting facility under professionally-managed conditions and can't readily decompose in the natural environment or in your backyard – would it be okay to label it **compostable**, or not?

Yes	31.1
No	63.2
Unsure (not read)	4.8
Refused (not read)	0.9



Q15. Large-scale composting facilities are a relatively new thing and are not yet available in all areas. If you were at your local grocery store and saw items, such as water bottles or deli containers, that were labeled "compostable," would you assume that large-scale composting facilities were available in your area?

Yes	43.4
No	53.4
Unsure (not read)	2.7
Refused (not read)	0.6

Q16. If a packaging label carried the following information: "This package was designed to be composted in a large-scale composting facility. Large-scale composting facilities are not yet available in all areas. Check with your community to see if composting is available in your area," how likely would you be to check to see if a large-scale composting facility was available in your community?

Very likely	25.4
Somewhat likely	26.1
Not very likely	26.1
Not at all likely	20.7
Unsure (not read)	1.3
Refused (not read)	0.4
TOTAL LIKELY	51.5
TOTAL UNLIKELY	46.8

Q17. Is curbside recycling available in your area?

Yes	60.7
No	34.4
Unsure (not read)	4.6
Refused (not read)	0.3

### Q18. [ASKED OF THOSE WHO SAY "YES" TO Q17]

Thinking about packaging items that are designed for composting, but only after being collected and taken to a large-scale facility, how willing would you be to sort these items, much as you do your recycling, but in a separate container from your recyclables? [n=608]

Very willing	55.1
Somewhat willing	31.4
Not very willing	6.6
Not at all willing	5.5
Unsure (not read)	1.4
Refused (not read)	-
TOTAL WILLING	86.5
TOTAL UNWILLING	12.1

Q19. Imagine you are sorting a mixture of empty plastic water bottles for recycling or composting. Some of the water bottles are made from traditional plastics that are recyclable and some of the water bottles are made from corn-based plastics that can be composted in a large-scale composting facility. In your view, which do you think would cause a bigger problem: Accidentally sending recyclable plastics to a composting facility or accidentally sending compostable plastics to a recycling facility?

Sending recyclable plastics to composting facility	54.3
Sending compostable plastics to recycling facility	21.4
Both errors would present an equal problem <i>(not read)</i>	8.8
Neither error would present a problem (not read)	2.6
Unsure (not read)	12.3
Refused (not read)	0.6

Q20. Do you happen to know whether a large-scale composting facility is available in your area? [IF YES: Is the large-scale composting facility part of a curbside collection program, or are residents required to drop-off discards at a designated location?]

Yes - I otal	9.7
Curbside Program	4.4
Drop-off	2.7
Not sure which	2.6
No large scale facility	61.9
Unsure (not read)	28.3
Refused (not read)	0.1

### **DEMOGRAPHICS**

Thank you. Now just to make sure our survey is representative....

D1. Age

18-24	12.5
25-34	18.5
35-44	20.7
45-54	17.4
55-64	11.7
65-74	8.7
75+	8.2
Refused (not read)	2.3

D2. Please tell me which of the following categories best describe your educational background?

Some high school	4.2
High school graduate	19.5
Some college	32.4
College graduate	27.5
Post graduate degree	15.8
Unsure (not read)	0.2
Refused (not read)	0.4

D3. And is your employment status...

Employed full-time	54.4
Employed part-time	9.9
Seeking employment	3.2
Full-time homemaker	7.7
Student	3.0
Retired	18.9
Disabled	2.1
Refused (not read)	0.8

### [ASKED OF THOSE WHO SAY "EMPLOYED" IN D3] D4. What is your occupation? [n=644]

		Administrative support	6.7
		Craft and repair	2.2
		Executive and managerial	13.5
		Laborer	9.6
		Medicine and health care	8.7
		Professional	20.3
		Sales	9.7
		Service	4.7
		Technician	5.2
		Transportation and material moving	4.2
		Other	15.3
		Refused (not read)	0.1
D5.	Politically, do you generally conside	er yourself	
		Republican	28.8
		Democrat	32.3
		Independent/other (not read)	29.1
		Unsure (not read)	3.7
		Refused (not read)	6.0
D6.	What do you consider to be your ra	acial or ethnic background?	
D6.	What do you consider to be your ra	acial or ethnic background?  White/Caucasian	67.3
D6.	What do you consider to be your ra		67.3 11.8
D6.	What do you consider to be your ra	White/Caucasian	
D6.	What do you consider to be your ra	White/Caucasian Black/African-American	11.8
D6.	What do you consider to be your ra	White/Caucasian Black/African-American Hispanic/Spanish/Latino	11.8 9.7
D6.	What do you consider to be your ra	White/Caucasian Black/African-American Hispanic/Spanish/Latino Asian	11.8 9.7 3.5

D7. And please stop me when I reach the general category closest to your annual household income...

Under \$20K	11.1
\$20K to \$40K	19.2
\$40K to \$60K	16.5
\$60K to \$80K	14.8
\$80K to \$100K	11.5
\$100K to \$150K	10.0
Over \$150K	4.4
Unsure (not read)	2.0
Refused (not read)	10.5

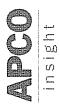
D8. Gender (By observation: do not ask)

Male	48.5
Female	51.5

D9. Region

Northeast	19.1
Midwest	26.6
South	31.9
West	22.4

Thank you for taking our survey. Every opinion counts. Good Bye.



# THE LEST CALLES

Biodegradable and Compostable Study

September 2006



### Research Approach

This study was conducted among a national sample of 1,000 adults in the United States. The survey sample is representative of the U.S. adult population.

Survey Population:

U.S. adults, 18 years of age and older

Screened Random Digit Dial (RDD)

Sample Design:

Sample Size:

n=1,002

Margin of Error:

Data Collection Methodology:

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Telephone Interviewing (CATI)

± 3.1 percent at 95% confidence

Interview Dates:

September 5-10, 2006





## What does biodegradable mean?

- For most people, this term means that the material is able to decompose or break down naturally (on its own).
- Most people believe the material would break down in 1-2 years (but at least one says it could take as long as 7 years and be OK).
- Biodegradable material is generally seen as synthetic, that is, it is manufactured from manmade materials.
- breaks down the material disappears completely there is nothing left behind. One key attribute assigned to biodegradable by most people is that when it
- As a result, adults say the material is not harmful to the environment.
- There is some sense that you can just throw out the biodegradable material and it will dissolve completely, on its own.
- A few people expect biodegradable material will give back to the Earth in terms of soil *ala* compostable material.





### What does compostable mean?

- Compostable means that the material can be put back into the ground to make soil, mulch, or fertilizer that can be used in a garden or around your home.
- beneficial to the Earth. This stands in opposition to biodegradable material The chief attribute of compostable materials is that the decomposition is which most believe disappears completely.
- Compostable materials are natural or organic materials and include leaves, twigs, grass clippings, food products (fruit peels, vegetable parts, etc.) and other materials.
- These materials are expected to break down and be usable in a matter of months (3 months to a year).
- About one in five adults interviewed could not provide a definition of compostable (this is more than twice the figure as couldn't define biodegradable).



### American Chemistry Council Biodegradable and Compostable Survey General Public (RDD)

n=1,000 (+- 3.1%)

2006

conducting an opinion so kind. We're talking to pe random so that your opin	calling from Insight Research. We're a national polling institute rvey on important issues facing the nation. This isn't a sales call of any ople across the country and your telephone number was selected at ions can be counted with other Americans. The survey takes only a
, , ,	say they find it very interesting. Let me begin by asking  **IIZATION] May I speak with the person in the household 18 years or

older who has had the most recent birthday?

Q1. I'd like to discuss what it means to you for something to be "biodegradable." Please tell me, in your own words, what you think it means if something is "biodegradable." [PROBE: What else does this mean to you?]

[RECORD VERBATIM; 99=DK]

Q2. From what you know, if something is labeled "biodegradable," does that mean it will decompose in...

The second secon	Yes	No (	Jnsure/DK	Refused
The natural environment	\$\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2	8	9
2. In your backyard	1	2	8	9
3. In a landfill	1	2	8	9

Q3. As you may know, some manufacturers are starting to make packaging products – things like water bottles, coffee cups, food takeout containers, and shopping bags – that are designed to be biodegradable. Which would be less burdensome in a landfill: traditional packaging products or biodegradable packaging products, or is there no difference? [PROBE: Would that be much less burdensome or somewhat less burdensome in a landfill?]

Traditional packaging products much less burdensome 1
Traditional packaging products somewhat less burdensome 1

Biodegradable packaging much less burdensome	3
Biodegradable packaging somewhat less burdensome	4
No difference	5
Unsure (not read)	8
Refused (not read)	9

Q4. If a package is labeled "biodegradable," what should be the maximum amount of time that it should take for that package to decompose?

1 month	1
3 months	2
6 months	3
1 year	4
5 years	5
Other (not read)	6
Unsure (not read)	8
Refused/DK (not read)	9

Q5. In your view, which is better for the environment: a package that will biodegrade or a package that can be recycled at the end of its useful life, or is there no difference? [PROBE: Would that be much better for the environment or somewhat better for the environment?]

Biodegradable much better	1
Biodegradable somewhat better	2
Recycled much better	3
Recycled somewhat better	4
No difference	5
Unsure (not read)	8
Refused (not read)	9

Q6. Thinking about various types of packaging – things like water bottles, coffee cups, food takeout containers, and shopping bags – if these items were "biodegradable," do you think there would be much more littering, somewhat more littering, somewhat less littering, much more littering or no difference?

Much more littering	1
Somewhat more littering	2
Somewhat less littering	3
Much less littering	4
No difference	5
Unsure (not read)	8
Refused (not read)	9



Q7. For each of the following statements, please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. First...[ROTATE LIST]

888		Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Unsure (Not Read)	Refused (Not Read)
ı	Biodegradable packages will nelp reduce the burden on our andfills	1	2	3	4	8	9
l	Biodegradable packages will nelp reduce the amount of itter in the environment	1	2	3	4	8	9
l	Biodegradable packages will nelp reduce pollution in our oceans, rivers and beaches	1	2	3	4	8	9
	Vith biodegradable packaging, tering isn't really a problem.	1	2	3	4	8	9

Q8. As you may know, packaging can be made from natural materials, like trees, corn and other plant-based matter, or can be made from synthetic materials, like traditional plastics which are made from petroleum. If a package is made with natural materials, such as the newer corn-based plastics, is it more likely to be biodegradable than a package made from synthetic materials, or not?

Yes – more likely	1
No – no more likely	2
Unsure (not read)	8
Refused (not read)	9

Q9. Now I'd like to discuss what it means to you for something that can be composted or is "compostable." In your own words, what does it mean if something can be composted or is "compostable?" [PROBE: What else does this mean to you?]

[RECORD VERBATIM; 99=DK]

Q10. If something were said to be "biodegradable", does that mean the same thing, or something different than if something were said to be "compostable?" [IF SAME THING: Does it mean exactly the same thing to you, does it mean something *very* similar, or only *somewhat* similar?]

Exactly the same	1
Very similar	2
Somewhat similar	3

	Different Unsure <i>(not read)</i> Refused/DK <i>(not read)</i>	4 8 9
Q10A.	[IF Q10=2 OR 3] In what way is it similar for something to be something to be "compostable?"	e "biodegradable" and
	[RECORD VERBATIM; 99=DK]	
Q10B.	[IF Q10=2 OR 3 OR 4] In what way is it different for something to be "compostable?"	ing to be "biodegradable" and
	[RECORD VERBATIM; 99=DK]	
Q11.	Do you have a composting device or a compost pile in your	home or yard?
	Yes	1
	No	2
	Unsure (not read) Refused (not read)	8 9
Q12.	Some newer types of packaging are designed to be compose packaging will decompose naturally when placed in a certain such as a water bottle or deli container, were labeled "compose that it can decompose in a home compost pile or home	n environment. If a package, ostable," would that mean to
	Yes	1
	No	2
	Unsure (not read)	8
	Refused (not read)	9
Q13. Some newer types of packaging are designed to be compostable under profess managed conditions requiring high heat, moisture and oxygen flow. After the pais used, these items <b>must</b> be collected and taken to a large-scale, industrial confacility in order to fully breakdown as intended. In your view, is it correct for pacilike this to be labeled "biodegradable", or not?		en flow. After the packaging -scale, industrial composting
	Yes	1
	No	2
	Unsure (not read)	8
	Refused (not read)	9



SPLIT SAMPLE A (n=500)

Q14A. If a packaging item is designed to decompose in a large-scale, industrial composting facility under professionally-managed conditions and can't readily decompose in the natural environment or in your backyard – would it be okay to label it **biodegradable**, or not?

Yes	1
No	2
Unsure (not read)	8
Refused (not read)	9

### SPLIT SAMPLE B (n=500)

Q14B. If a packaging item is designed to decompose in a large-scale, industrial composting facility under professionally-managed conditions and can't readily decompose in the natural environment or in your backyard – would it be okay to label it **compostable**, or not?

Yes	1
No	2
Unsure (not read)	8
Refused (not read)	9

Q15. Large-scale composting facilities are a relatively new thing and are not yet available in all areas. If you were at your local grocery store and saw items, such as water bottles or deli containers, that were labeled "compostable," would you assume that large-scale composting facilities were available in your area?

Yes	1
No	2
Unsure (not read)	8
Refused (not read)	9

Q16. If a packaging label carried the following information: "This package was designed to be composted in a large-scale composting facility. Large-scale composting facilities are not yet available in all areas. Check with your community to see if composting is available in your area," how likely would you be to check to see if a large-scale composting facility was available in your community?

Very likely	1
Somewhat likely	2
Not very likely	3
Not at all likely	4
Unsure (not read)	8
Refused (not read)	9



Q17.	Is curbside	recycling	available	in your	area?
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Yes	1
No	2
Unsure (not read)	8
Refused (not read)	9

Q18. [IF Q17=1] Thinking about packaging items that are designed for composting, but only after being collected and taken to a large-scale facility, how willing would you be to sort these items, much as you do your recycling, but in a separate container from your recyclables?

Very willing	1
Somewhat willing	2
Not very willing	3
Not at all willing	4
Unsure (not read)	8
Refused (not read)	9

Q19. Imagine you are sorting a mixture of empty plastic water bottles for recycling or composting. Some of the water bottles are made from traditional plastics that are recyclable and some of the water bottles are made from corn-based plastics that can be composted in a large-scale composting facility. In your view, which do you think would cause a bigger problem: Accidentally sending recyclable plastics to a composting facility or accidentally sending compostable plastics to a recycling facility?

Sending recyclable plastics to composting facility	1
Sending compostable plastics to recycling facility	2
Both errors would present an equal problem (not read)	3
Neither error would present a problem (not read)	4
Unsure/DK (not read)	8
Refused (not read)	9

Q20. Do you happen to know whether a large-scale composting facility is available in your area? [IF YES: Is the large-scale composting facility part of a curbside collection program, or are residents required to drop-off discards at a designated location?]

Yes – curbside program	1
Yes - drop-off	2
Yes – Not sure which	3
No large-scale composting facility in your area	4
Unsure/DK (not read)	8
Refused (not read)	9

### **DEMOGRAPHICS**

Than	ık you. Now just to make sure our surve	ey is representative		
D1.	In what year were you born?	<del></del>		
D2.	Please tell me which of the following categories best describe your educational background?			
		Some high school High school graduate Some college College graduate Post graduate degree Unsure (not read) Refused (not read)	1 2 3 3 4 8 9	
D3.	And is your employment status			
		Employed full-time Employed part-time Seeking employment Full-time homemaker Student Retired Disabled (Not read) Unsure (not read) Refused (not read)	1 2 3 4 5 6 7 8	
D4.	What is your occupation?	[COMMERCE CLASSIFICATIONS]		
 D5.	D5. Politically, do you generally consider yourself			
		Republican Democrat Independent/Other (not re Unsure (not read) Refused (not read)	1 2 ead) 3 8 9	
D6.	What do you consider to be your raci	al or ethnic background?		
		White/Caucasian	1	



		Black/African-American	2
		Hispanic/Spanish/Latino	3
		Asian	4
		Other	5
		Unsure (not read)	8
		Refused (not read)	9
D7.	And please stop me when I reach the ge income	neral category closest to your	annual household
		Under \$20,000	1
		\$20-40,000	2
		\$40-60,000	3
		\$60-80,000	4
		\$80-100,000	5
		\$100-150,000	6
		Over \$150,000	7
		Unsure (Not read)	8
		Refused (Not read)	9
D8.	Gender (By observation: do not ask)	Male Female	1 2

Thank you for taking our survey. Every opinion counts. Good Bye.

